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ABSTRACT

The relationship between attitudes and behavior has been a topic of considerable debate. Accordingly, this paper reports a meta-analysis of 83 attitude-behavior studies. The analysis suggests that attitudes significantly predict future behavior (combined p .000000000001); the average attitude-behavior correlation (ABC) is r=.38. Methodologically, ABCs are higher for studies using: (1) self-report measures of behavior; (2) primarily non-students as subjects; or (3) attitude and behavior measures of corresponding levels of specificity. Substantively, ABCs tend to be higher when the attitude is formed by direct experience, the attitude is held with certainty, the subject is a low self-monitor, or the situation increases self-focused attention. The limitations and future directions of attitude-behavior research are discussed. (Author/TE)

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Attitudes and the Prediction of Behavior: A Meta-analysis

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Presented at the 1990 American Psychological Association Convention

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ABSTRACT

The relationship between attitudes and behavior has been the topic of considerable debate. The present paper reports a meta-analysis of 83 attitude-behavior studies. The analysis reveals that attitudes significantly predict future behavior (combined $p << .000000000001$). The average attitude-behavior correlation (ABC) is $r = .38$. Methodologically, ABCs are higher for studies using (a) self-report measures of behavior, (b) primarily non-students as subjects, or (c) attitude and behavior measures of corresponding levels of specificity. Substantively, ABCs tend to be higher when (a) the attitude is formed by direct experience, (b) the attitude is held with certainty, (c) the subject is a low self-monitor, or (d) the situation increases self-focused attention. The limitations and future directions of attitude-behavior research are discussed.

The attitude concept has played a central role in both scientific and lay attempts to understand human thought and behavior. However, the relationship (or lack thereof) between attitudes and behavior has been the topic of considerable debate (e.g. Wicker, 1969). Originally, there was little concern with the attitude-behavior relationship, but by the 1950s there was a growing suspicion, particularly in sociology, that attitude-behavior inconsistency is widespread. This pessimism culminated in Wicker's (1969) often-cited conclusion that attitudes are typically unrelated or only slightly related to behavior. This conclusion, which paralleled Mischel's (1968) argument that traits rarely predict behavior, caused a crisis in attitude research as many questioned the validity of a century of a attitude research. Efforts to explain the apparent attitude-behavior inconsistency were of two major types: methodological explanations, arguing that inconsistency can be largely attributed to poor methodology, and moderator variable explanations, arguing that the level of consistency depends on other variables. Although research generated to support these explanations has led to a general era of optimism about the attitude-behavior relationship, there is still disagreement about the magnitude of attitude-behavior correlations (e.g. Ajzen and Fishbein, 1977; McGuire, 1985). The purpose of the present meta-analysis is to determine more precisely than previous reviews the extent to which attitudes predict future behavior, and to examine quantitatively and critically the methodological and substantive variables that influence the relationship.

Method

An attempt was made to locate all published studies in which: (1) attitudes were correlated with future behavior, (2) attitudes and behavior were measured on separate occasions (i.e. not in the same questionnaire or interview), (3) attitudes and behavior were measured for the same subjects (i.e. the unit of analysis must be the individual), and (4) no attempt was made to change attitudes during the study. On the basis of these criteria, a number of studies addressed in previous reviews were excluded. Eighty-three studies were included in the meta-analysis.

Results

Attitudes significantly predict future behavior (combined $p << .000000000001$). The attitude-behavior correlations (ABCs) range from -.10 to .91, with the average being .38 (see stem-and-leaf plot in Figure 1). Sixty-four studies found attitudes and behavior to be significantly correlated. There would have to be 54,563 additional studies in "file drawers" reporting no correlation between attitudes and behavior to reduce the overall set of results to nonsignificance, i.e. $p > .05$.

Methodological explanations

The influence of five methodological characteristics of the studies on attitude-behavior correlations (ABCs) was examined. The use of self-report measures of behavior, the use of non-students as subjects, and the year of publication were significantly correlated with ABCs; the site of study (laboratory vs. field), and the size of study (number of subjects) did not (see Table 1). The effects of self-reports and the use of non-students remain significant even when the other characteristics are partialled out.

ABCs may be higher when self-reports are used because (a) subjects might give inaccurate self-reports to appear consistent, (b) subjects might not remember their behavior, and simply infer their behavior from their attitudes, or (c) researchers might use self-reports for behaviors which are highly predictable from attitudes (e.g. voting). ABCs may be higher when non-students are used because their attitudes are more likely to (a) be held with certainty, (b) be based on direct experience, or (c) exhibit wide ranges and large variance.

The correlation between year of publication (although not technically a methodological variable) and ABC was statistically significant, but not after the type of behavior measure was partialed out; year of publication might also be correlated with other factors (e.g. methodological sophistication of the study). The site of study (laboratory vs. field) was not correlated with ABC. The lab/field distinction is a very broad classification of situations, and it seems probable that the lab setting will increase ABCs in some instances, and decrease them in others.

Correspondence

The "correspondence" hypothesis, a type of methodological explanation, states that ABCs should be high when attitudes and behavior are measured at corresponding levels of specificity (Ajzen & Fishbein, 1977). Thus, general attitudes (e.g. toward the environment) should predict general behavioral tendencies (e.g. a multiple-act criterion of recycling, conservation, and signing relevant petitions), and attitudes toward specific behaviors (e.g. attending church next Sunday) should predict those behaviors. Eight studies which specifically manipulated correspondence were meta-analyzed. At high levels of correspondence, ABC = .54; at low levels, ABC = .13.

Some studies with high correspondence, however, reported low ABCs, and some studies with low correspondence reported high ABCs. These counter-intuitive findings are often the most psychologically interesting and informative. For example, the finding that attitudes toward church attendence next Sunday predicts that behavior is not terribly informative about the nature of that behavior. But the finding that prejudice predicts an "uncorresponding" behavior (aggression in a situation not involving minority groups; Genther & Taylor, 1973) tells us something new and informative about the nature of prejudice and of aggression.

Moderator Variables

Four classes of variables that moderate the attitude-behavior relationship were meta-analyzed: attitudinal, behavioral, personal, and situational. Together these variables ask: "Under what conditions do what kinds of attitudes held by what kinds of individuals predict what kinds of behavior?" (Fazio and Zanna, 1981).

Most research has examined attitudinal variables, and reveals that ABCs tend be higher when (a) the attitude is formed by direct experience, (b) the attitude is held with certainty, or (c) the attitude is very accessible from memory. Research on attitudinal moderators is largely based on two questionable assumptions: (1) the 'independence' assumption, under which researchers examine the effect of one attitudinal quality (e.g. accessibility), without considering that this quality is probably correlated with others, and (2) the 'generality' assumption, under which researchers assume that if a quality moderates the attitude-behavior relationship in one domain (e.g. attitudes toward ethnic groups), then it will do so in all domains.

Relatively little research has addressed other types of moderator variables. ABCs tend to be high (a) for behaviors which have been performed before, (b) for voting behavior, (c) for low self-monitors, and (d) in situations which increase self-focused attention. The lack of attention given to situational moderators is particularly surprising when one considers that most attitude-behavior research is conducted by social psychologists and sociologists. These other types of moderating variables offer some of the most promising avenues for future attitude-behavior research.

Conclusion

There is little doubt that attitudes significantly predict behavior; however, a statistically significant correlation is not necessarily large in any practical sense. A skeptic might argue that attitudes account for only 13% of the variance in behavior, essentially supporting Wicker's conclusions. However, the once standard method of interpreting correlations by squaring them to achieve the proportion of variance accounted for appears to be a misleading indicator of effect size (Ozer, 1985), and the implicit assumption that all remaining variance (in this case, 87%) is attributable to situational factors is simply wrong. Some of the variance is simply error due to the unreliability of measures (West, 1983). Further, most of the effect sizes in the social sciences are in the .30 to .40 range, including those of some of the classic situational influences on behavior (Cohen, 1977; Funder and Ozer, 1983).

The conclusion of this review is that attitudes significantly and substantially predict future behavior. If, for example, measures of discriminatory behavior are obtained for 100 prejudiced and 100 unprejudiced subjects, and the correlation between the attitude (prejudice, or attitude toward an ethnic group) and discriminatory behavior is r= .38, then attitudes will correctly predict behavior 69% of the time. Further, the average ABC is .38; 42% of the ABCs are above .38, and 27% are above .50. More importantly, ABCs are consistently higher (around .50 to .60) when basic measurement principles such as correspondence are observed. In this example, correlations of .50 and .60 allow for the correct prediction of behavior 75% and 80% of the time, respectively. This level of predictability clearly implies a substantial and practically important relationship.

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Figure 1

Stem-and-Leaf Plot of Attitude-Behavior Correlations

Stem	Leaf
.9	1
.8	1 4
.7	2
.6	1 2 4 5 7 7
.5	0 0 1 2 3 3 4 4 6 8 8 9
.4	0 0 1 1 1 4 5 5 5 8 8
.3	0 0 0 0 0 0 1 2 3 4 7 7 8 8 9 9
.2	1 1 2 2 2 3 3 4 4 4 5 5 6 7 8 8 9 9
.1	0 0 3 5 8
.0	0 0 3 3 8 8 9
-.0	2 9
-.1	0

Table 1

Correlation Matrix of Study Characteristics and ABC

	Year	N	Student	Lab	Self-report
N	.09	---			
Student	.01	-.13	---		
Lab	.15	-.21*	.40***	---	
Self-report	.32**	.35***	-.36***	-.27**	---
ABC	.24*	.03	-.29**	-.07	.39***

Note: n = 83 studies

* $p < .05$

** $p < .01$

*** $p < .001$